

ABSTRACT

The present invention provides a process for preparing a low molecular weight olefin (co)polymer having a narrow molecular weight distribution with high productivity, by polymerizing or copolymerizing an olefin in the presence of an olefin polymerization catalyst comprising (A) a specific Group 4 transition metal compound, and (B) at least one compound selected from the group consisting of (B-1) an organometallic compound, (B-2) an organoaluminum compound, (B-3) an organoaluminum oxy-compound, and (B-4) a compound which reacts with the Group 4 transition metal compound (A) to form an ion pair; and compounds useful in that process.